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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/755,658 | 01/12/2004 | Bruno M. LaFontaine | H1540 | 9304 |
| 45305 | 7590 | 05/10/2005 | EXAMINER | |
| RENNER, OTTO, BOISSELLE & SKLAR, LLP (AMDS) | | | NGUYEN, HUNG | |
| 1621 EUCLID AVE - 19TH FLOOR | | | | |
| CLEVELAND, OH 44115-2191 | | | ART UNIT | PAPER NUMBER |
| | | | 2851 | |

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/755,658

Applicant(s)

LAFONTAINE ET AL.

Examiner

Hung Henry V. Nguyen

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,6-10,14,16,17 and 20 is/are allowed.
- 6) ☒ Claim(s) 11-13, 18-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-13, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoinkis et al (U.S.Pat. 5,872,694).

With respect to claims 11-13, and 18-19, Hoinkis et al discloses a method and apparatus for monitoring the flatness of a semiconductor wafer for use in an lithography device and comprising substantially all of the limitations of the instant claims such as: chucking the wafer (14) to an electrostatic chuck (12); scanning the chucked wafer to generate a first flatness profile by a contactless capacitance probe (50) (see col.3, lines 49 thru col.4, line 36); the detected flatness of the wafer is used to determine the proper clamping voltage/electrostatic clamping forces used to retain the wafer to the chuck (see col.5, lines 38-45) and the detected flatness of the wafer is stored in the memory (19) and during subsequent process of the wafer, the flatness of the wafer is again detected and compared with the previous data stored in the memory (19) to determine the proper clamping voltage of the electrostatic chuck (see col.5, lines 35-62). Furthermore, Hoinkis et al suggest, the wafer (14) is measured for wafer warpage by any suitable arrangement (see col.4, lines 62-65). Hoinkis does not expressly disclose the method and apparatus as taught being use for an EUV reflective mask. However, since the flatness of semiconductor and the EUV reflective mask have a same problem of being affected by

Art Unit: 2851

contamination. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of Hoinkis to obtain the invention as specified in the instant claims of the present invention. It would have been obvious to one having ordinary skill in the art to apply the method and apparatus of Hoinkis for the purpose of monitoring the flatness of an EVU lithography reflective mask whereby the quality of the image to be printed will be improved.

Allowable Subject Matter

3. Claims 1, 6-14, 16-20 are allowed since the applicant's arguments with respect to these claims are deemed persuasive and incorporated herein by reference.

Response to Arguments

4. With respect to amended claims 11-16, applicant's arguments have been carefully reviewed but have been traversed in view of new ground of rejection as set forth above.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2851

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V. Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hung Henry V Nguyen
Primary Examiner
Art Unit 2851

hvn
4/30/05